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"Darwin and Dogma: Incompatible or Incomparable?"

After returning from his five-year journey aboard the HMS Beagle in 1836, a 26-year old Charles Darwin had already formulated the basis of his theory of natural selection. He had arrived at the conclusion that environmental factors favor certain mutations in individual organisms, thereby impersonally shaping the evolution of new species (Haught 7-8). However, he did not seek to publish his findings until some twenty years later – when it was evident that Alfred Russell Wallace would publish the idea if Darwin did not (Haught 9). This raises the question: Why did Darwin take so long to publish his novel, groundbreaking ideas? A study of Darwin's life reveals that he was a gentle man, very sensitive to the pain of others. It appears that he was very well aware of the philosophical schism he would raise with people of faith – including his dear wife Emma (Haught 9). To be sure, Darwin's theory did touch on a number of points that until then had been the sole provenance of theology. The debate of compatibility between evolution and religious doctrines has been going on ever since Darwin published his theories, and is especially evident within the hierarchical structure of the Catholic Church. Despite the disagreement of many practicing Catholics, it appears that evolution may in fact be compatible with Catholic dogma in a consistent and intellectually honest way.

Upon first glance, it appears that Catholic doctrines and evolution say very different things about the origins of life. Evolution holds that species differentiate as environmental factors select for certain favorable mutations. Traditional interpretations of Catholic doctrine

hold that each species was created directly by God, and that God imbues each human with a soul (Brundell 84, Haught 31). What can any sort of redundant divine intervention add to a theory that can explain all creation without it? Why should evolution, a theory with such explanatory power, even bother to engage with the belief that Adam was created from mud by an omnipotent deity (Artigas 23)? How could this belief of direct creation by God possibly be compatible with the supposedly indifferent, mechanical processes of evolution? Moreover, how can belief built on such specific tenets ever reconcile itself in a consistent way with evolution's explanations of the same phenomena?

Despite these issues, it appears that the Church's position is turning. While the Vatican's position on evolution has never been decisive, it took a somewhat anti-evolution stance around the turn of the twentieth century, privately denouncing several books that tried to reconcile evolution and Catholic doctrine (Artigas 19, Brundell 86). However, it never took a public stance, likely to avoid a repeat of the "Galileo affair" (Artigas 6). In 1950, Pope Pius XII released the encyclical *Humani Generisi – Of Human Kind*, which states that evolution and Catholicism are not mutually exclusive. He holds that, while the human body may have evolved, God creates each human soul – and there must have been one original Adam from whom every human has descended (Brundell 94). This latter requirement was even reinterpreted sixteen years later in 1966 by Pope Paul VI to allow the possibility of polygenesis – descent from multiple pairs of human ancestors (Brundell 94-95). Most recently, in 1996, Pope John Paul II stated that "evolution is more than a hypothesis" (qtd. in Artigas 1). However, none of these rebukes or encouragements give a clear understanding of how evolution and Catholicism might be reconciled. Perhaps evolution and the Vatican can both cede a few points – but the theories still

explain the origins of life in starkly different terms. Is there ever a possibility that they might peaceably coexist in an intellectually responsible way?

The first step to such a coexistence must lie in letting go of a strict literal interpretation of the Bible, the main issue that some conservative Catholics take with evolution. This is not such a new or radical idea as it might seem. Even in 1894, as pro-evolution books were being denounced by the Church, Vatican reviewers believed that a "literal interpretation of Genesis [...] 'is not correct'" (Brundell 87). As the origins of life were undergoing a transition from a Bible-based explanation to a methodologically-based one in the mid-nineteenth century, the field of geology was as well. "Previously geology had generally endorsed catastrophism, the belief that geological changes, such as the carving out of great canyons, had occurred abruptly rather than over long spans of time" (Haught 7). However, around the time of Darwin, Charles Lyell began to introduce the theory of gradual geologic change, leading to the theory of tectonic plates (Haught 7). While there are still some people that believe the earth is some 6,000-odd years old, this is not official Catholic dogma – and rightly so. Given its incredible sway and explanatory power in the field of geology today, any doctrine that wool-headedly ignores the theory of tectonic plates and geological history is doing a disservice to the natural sciences – especially since a literal reading of Genesis is not even necessary to subscribe to Catholic dogma.

The same principle applies to "special creation" – the belief that God created each species separately, as it is today (Haught 31). This belief originated from a not necessarily correct literal reading of Genesis, which states, "[...] God created the great creatures of the sea and every living thing with which the water teems and that moves about in it, according to their kinds, and every winged bird according to its kind" (1:21). Absent other explanation, a benevolent divine Creator is perfectly reasonable – and this explanation is what some conservative Catholics cling

to in their attacks on evolution. However, evolution provides a more methodological explanation for the differentiation of species – one that is easier to observe and make predictions with than an omnipotent deity creating species by fiat. That said, the interpretation that God individually created each species is not even in fact strictly sanctioned by the Bible. A few verses further down, Genesis states, "God said, 'Let the land produce living creatures according to their kinds: the livestock, the creatures that move along the ground, and the wild animals, each according to its kind'" (1:24). To allow that "the land" can "produce living creatures" suddenly sounds surprisingly compatible with the theory of natural selection. In this instance, Darwin's theory does not call for a complete rejection of the Bible's creation story – merely a reinterpretation. Even if He doesn't specifically create each species, God can still provide the overall cosmic conditions that have allowed species to evolve (Haught 26).

Another issue often brought up is the matter of a soul. Catholic doctrine holds that each human possesses an immortal soul created and divinely granted to us by God, a view held by most if not all devout Catholics (Artigas 42). Even in its concessions to evolutionary theory, the Church has consistently emphasized this point (Brundell 94). Darwin's theory itself makes no mention of souls either one way or the other, an omission that many Catholics take to mean that Darwin's theory implies souls do not exist. However, it only means that his theory cannot technically preclude the existence of souls. This, though, is not a very satisfying resolution. The problem compounds if we are willing to accept that humans evolved from "lower" animals — which evolution compels us to and the Church states it is permissible to (Brundell 89, 94). What, then, distinguishes humans from other animals that allows us to be made in God's image and to possess souls? Can an arbitrary dividing line be drawn in our evolutionary past where we suddenly began receiving souls because we looked enough like God? While in theory possible,

this contains a fair amount of the ridiculous. However, neo-Darwinism (Darwin's theory combined with modern understands of genetics and microbiology) provides a distinction between humans and other animals. Although we are made up of the same atoms, molecules, and cells that make up other animals, our DNA sets us apart. On a molecular level, it has very much in common with other animals – it is certainly made of the same molecules and, in many cases, largely in the same order. However, the distinctive ordering of DNA can be understood as more than molecular – it is informational. DNA sequences are not random and arbitrary: different sequences create different proteins and therefore, on a macroscopic level, "mean" fundamentally different things. It is this information contained in our DNA that differentiates us from other animals – and can be seen as guaranteeing that each of us are unique, worthy of an individual soul in the eyes of God (Haught 50-51).

This realization, however, should give us pause. If evolution can explain away even the origin of souls, how much further use could Catholic doctrine possibly be? Why even bother trying to reconcile the two if evolution is clearly a superior explanatory tool than religious dogma ever could be? The answer, in fact, has already been presented. We have already observed DNA at multiple levels: materialistically, as a collection of atoms and molecules; and at a higher level, as information. This same dichotomy can be applied to any number of phenomena in our natural world. For instance, a colony of ants can be observed either as random chaotic motion of individual ants or as a cohesive, purposive whole (Hofstadter 312). Likewise, our brain activity can be observed as the mechanistic firing of neurons or as a vessel of conscious thought (Hofstadter 340). Just because one explanation applies does not mean that other explanations are invalid; they can simply deal with different aspects of the phenomenon. As

came from printer ink does not diminish the significance of the fact that the words are present because I wished to express my thoughts on evolution and Catholic doctrine – or, even higher up, because my instructor asked me to write a paper (Haught 24).

The same principle applies to evolution and Catholic dogma. Just because they do not necessarily make the same points does not mean that they cannot both explain, simultaneously, the same natural phenomenon. Evolution provides a wonderful explanation of how our universe works – the mechanics by which new species are created and by which humans are made distinct and unique from other animals. However, it does very little – if anything – to explain why the universe works. Some contemporary Darwinists such as Richard Dawkins hold that this lack of explanation why implies that there is no explanation of why – that the universe is ultimately purposeless (Haught 26). While this is a valid belief – one that Catholic dogma cannot disprove, per se – it is also not necessary. Simply because one believes in the mechanics – the how of evolution – does not imply that one must believe the why of purposelessness that Dawkins believes. It is perfectly valid to believe in the mechanics – the how of evolution – while believing in the why that Catholic doctrine dictates. These multiple levels of explanation are not contradictory because they fundamentally cannot be contradictory. They are simply answers to two different yet related questions, to wit: How do species evolve? Evolution. Why do species evolve? Depending on your viewpoint – there is no reason, or God, or any number of other beliefs. The how can be scientifically proven; the why is dependent upon personal belief.

Evolution and Catholic doctrine undeniably give different answers to the question of creation and development of species, particularly humankind. However, just because they are different does not mean that they are mutually exclusive – no more so than the fact that you're reading individual letters precludes you from understanding my overall meaning. The *how* of

evolution does not imply the *why* of Catholic beliefs, for sure – but nor does it undermine them. Because they explain the world at entirely different levels of meaning, Darwin's theory of evolution and Catholic dogma cannot be incompatible – because they are incomparable.

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